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## 1.0 POLICY:

1.1 To ensure that uninterrupted electrical power supply at desired voltage is given for all including medical equipment, general lighting system and other electrical appliances in the hospital premises.

1.2 The policy & procedure adopted here is based on IER 1956, amended 2005.

1.3 The policy will apply to all fixed and portable equipment, and to all main, sub main and final circuit distribution systems at the premises.

1.4 This electrical safety policy is supplemented by high and low tension rules that must be followed.

## 2.0 PURPOSE:

To ensure safe operation and maintenance of electrical system and appliances.


**3.0 SCOPE :** Hospital wide.

## 4.0. RESPONSIBILITY :

Engineering department.

## 4.0 PROCEDURE:

4.1 In accordance with the IER 1956 amended 2005 the following appointments are made and maintained for both high and low tension systems:

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Rule 3 person ( ‘C’ license ) : who is an authorized person to handle High tension & other electrical installation requirements.


Following is the required no. of persons to operate & maintain electrical system and equipment in the hospital.

General shift	-	‘B’ license holders	-	3
General shift	-	Trained helpers	-	2
General shift	-	‘C’ license holders	-	3
Shift operation-		‘C’ license holders	-	1
Shift operation-		‘B’ license holders	-	4
Shift operation-		Trained helpers / ‘H’		
		License holder	-	2

## 4.2. SAFE WORKING PRACTICES:

4.2.1 All High tension installations in the premises should be operated / maintained only by the Rule 3 authorized persons.

4.2.2 However, if such situations requires ‘B’ license holder can operate or carryout maintenance work on all electrical installations either under direct supervision or as per safety guidance approved by authorized persons.

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4.2.3 No person shall undertake any repairs, maintenance, cleaning, alteration or such work, on any part of high voltage electrical equipment unless such parts of the electrical equipment are dead, proved dead, isolated and earthed to ensure that the specified conditions cannot be changed by unauthorized persons.

4.2.4 The low voltage safety rules require that work on low voltage electrical equipment and conductors shall only be carried out when they are dead, proved dead and isolated from all sources of supply and when steps have been taken to prevent their re-energisation.


4.2.5 Strict compliance with the **safety rules** is a requirement of all personnel.

#### **4.3 SAFETY DOCUMENTATION:**

4.3.1 As per hospital electrical procedure, end users shall be notified of any proposed interruption to electrical services and to the extent and likely duration of the disruption. Where the interruption is pre-planned, the end user should be given prior warning and be notified in writing.

4.3.2 Where the interruption is from a final distribution board the person undertaking the work should inform the person in charge of the user department concerned before commencing work.

#### **4.4 LOCKING POLICY:**

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4.4.1. All low voltage switch rooms and switch boards shall be locked to prevent unauthorized access. All distribution boards not housed in those areas shall be fitted with lockable covers and also kept locked.

4.4.2 All switches high tension & MV switchgears shall be fitted with means of being locked in the off position. In case of sub switchboard and distribution board a warning sign board (men at work, don't switch on) should be displayed.


#### **4.5 SYSTEM DIAGRAMS LABELS ETC:**

4.5.1 A schematic diagram showing the high voltage distribution and the main low voltage distribution including standby supplies shall be located in each sub station. In the main sub station, the schematic diagram is enclosed in a wall mounted laminated board.

4.5.2 Schematic diagrams shall be located in each main and sub main low voltage switch room giving full details of the sources of supply and the circuits served from that switchboard.

4.5.3 All switch rooms, cupboards or other enclosures housing electrical distribution equipment shall be labeled with appropriate danger sign.

4.5.4 Incoming supply isolators shall be labeled as incomer and shall also have a label with details of the source of supply.

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4.5.5 Outgoing circuit switches shall be fitted with circuit identification labels and other relevant information.

4.5.6 All items of electrical equipment and switchgear operated at 415 V shall be fitted with danger signs on all removable covers giving access to live connections.

## **5.0 PORTABLE EQUIPMENT TESTING:**

All items of portable electrical equipment to be used within the premises shall be tested and documented by the engineering department.


## **6.0 FIRST AID TRAINING AND ACTION IN THE EVENT OF AN ACCIDENT:**

6.1 Sub stations, and in many cases switch rooms, are not only remote from occupied areas, but may be areas where work has to be undertaken during unsociable hours. In the event of an accident it is important that staff have some knowledge of first aid and it is also important that a means of calling for emergency medical assistance is readily available.

6.2 The staff who are manning the main sub station, is to be provided with basic telephone communication.

## **7.0 RECORDING INFORMATION AND EVENTS:**

Details of all activities concerning the high voltage distribution system including routine entry to sub stations for inspection, meter reading or cleaning as well as planned and emergency switching operations shall be recorded in the appropriate log book.

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## 8.0 SYSTEM MAINTENANCE:

Maintenance of the high voltage distribution system switchgear, transformers and protection and the testing and maintenance of the low voltage installations shall be arranged on a routine basis as envisaged in the preventive maintenance schedule. Visual inspections of sub stations, all switch rooms and electrical installations generally shall be carried out as a matter of routine.

## 9.0 TESTING OF ALTERNATE SOURCES:

9.1 The organization has adequate backup power source in the event of power failure.

9.2 The capacity of alternate source is as follows:

- Generator of 725 KVA – 1 No.

9.3 Periodical testing / maintenance of alternate source shall be carried out in accordance with the manufacturer's recommendation and hospital policy.

9.4 In this case the generators are tested on NO LOAD everyday (A Check)